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CYCLIZED AMINO ACID DERIVATIVES

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuing application of copending International Patent Application PCT/US00/18577, filed July 6, 2000, which claims priority of United States provisional patent 60/142,404, filed July 6, 1999.

TECHNICAL FIELD OF THE INVENTION

The present invention relates to cyclized amino acid derivatives for treating or preventing neuronal damage associated with neurological diseases. The invention also provides compositions comprising the compounds of the present invention and methods of utilizing those compositions for treating or preventing neuronal damage.

BACKGROUND OF THE INVENTION

Neurological diseases are associated with the death of or injury to neuronal cells. Typical treatment of neurological diseases involves drugs capable of inhibiting neuronal cell death. A more recent approach involves the promotion of nerve regeneration by promoting neuronal growth.

Neuronal growth, which is critical for the survival of neurons, is stimulated in vitro by nerve
25 growth factors (NGF). For example, Glial Cell LineDerived Neurotrophic Factor (GDNF) demonstrates
neurotrophic activity both, in vivo and in vitro, and is
currently being investigated for the treatment of
Parkinson's disease. Insulin and insulin-like growth
30 factors have been shown to stimulate growth of neurites
in rat pheochromocytoma PC12 cells and in cultured
sympathetic and sensory neurons [Recio-Pinto et al., J.
Neurosci., 6, pp. 1211-1219 (1986)]. Insulin and